AMENDMENTS TO THE SPECIFICATION

Please amend the paragraph beginning on page 2, line 24, as follows:

A system and method for user interface mirroring are provided. User interface objects are defined according to an object hierarchy that defines a logical relationship between a root element and one or more child elements. Additionally, the root element includes a directional property that is inherited by the child elements. A layout manager obtains the logical relationship and the specified directional property and correlates a set of physical coordinates to each display object according to the directional property, while maintaining the logical relationship. A renderer renders each of the display objects according to the specified directional property, while maintaining a truth table for graphical resources that could be rendered in one or more directions.

Please amend the paragraph beginning on page 6, line 16, as follows:

The computer 20 may also include removable/non-removable, volatile/non-volatile computer storage media. By way of example only, FIGURE 5 illustrates a hard disk drive [[36]]34 that reads from or writes to non-removable, non-volatile magnetic media [[38]]36, a magnetic drive 38 that reads from or writes to a removable, non-volatile magnetic disk 40, and an optical disk drive 42 that reads from or writes to a removable, non-volatile optical disk 44, such as CD-ROM or other optical media. Other removable/non-removable, volatile/non-volatile computer storage media that can be used in the exemplary operating environment include, but are not limited to, magnetic tape cassettes, flash memory cards, DVD, digital video tape, Bernoulli cap cartridges, solid state RAM, solid state ROM, and the like. The hard disk drive 34, magnetic disk drive 38, and optical disk drive 42 may be connected to the system bus 26 by a hard disk drive interface 54, a magnetic disk drive interface 56, and an optical drive interface 58,

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respectively. Alternatively, the hard disk drive 34, magnetic disk drive 38, and optical disk drive 42 are typically connected to the system bus 26 by a Small Computer System Interface (SCSI).

Please amend the paragraph beginning on page 7, line 26, as follows:

When used in a LAN network environment, the computer 20 is connected to the LAN 66 through a network interface adapter 68. When used in a WAN network environment, the computer typically includes a modem 69 or other means for establishing communications over the WAN [[68]]67, such as the Internet. The modem 69, which may be internal or external, may be connected to the system bus 26 via the serial port interface or other appropriate mechanism. In a networked environment, program modules depicted relative to the computer 20, or portions thereof, may be stored in the remote memory storage device. By way of example, and not limitation, FIGURE 5 illustrates remote application programs 48 as residing on memory device 24. It will be appreciated that the network connections shown are exemplary and other means of establishing communication between the computers may be used. Although many other internal components of the computer 20 are not shown, those of ordinary skill will appreciate that such components and their interconnection are well known. Accordingly, additional details concerning the internal construction of the computer 20 need not be disclosed in connection with the present invention.

Please amend the paragraph beginning on page 8, line 15, as follows:

When the computer 20 is turned on or reset, the BIOS 32, which is stored in ROM instructs the processing unit 22 to load the operating system from the hard disk drive 34 into the RAM 30. Once the operating system 46 is loaded into RAM 30, the processing unit executes the

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operating system code and causes the visual elements associated with the user interface of the operating system to be displayed on the monitor 61. When an application program 48 is opened by a user, the program code and relevant data are read from the hard disk drive and stored in RAM [[38]]30.

Please amend the paragraph beginning on page 10, line 13, as follows:

In another aspect of the present invention, once specified, a renderer, such as a box-rendering model, honors a directional property of an element when rendering individual display objects. In an illustrative embodiment of the present invention, display objects, such as display object 78 (FIGURE 1A), may be specified with display layout properties such as "content align = top left", "padding = 2, 5, 6, 10", "text string = FRED" and/or "border = 1, 1, 1, 1". FIGURE 2A is a block diagram [[104of]]104 of the display screen of FIGURE 1B illustrating a display object 106 having a LTR language reading direction and rendered with the three above-mentioned display layout properties. As illustrated in FIGURE 2A, "content align = top left" specifies that all text strings should begin in the left-hand side of the object, "padding = 2, 5, 6, 10" specifies padding dimensions from the left, top, right, and bottom of the display object, "text string = FRED" specifies the content of the text string to be inserted in the drawing object, and "border = 1, 1, 1, 1" specifies that drawing object should have a 1 unit border. Accordingly, the box renderer renders the display objects with the display layout properties, including an indicated directional property. One skilled in the relevant art will appreciate that any one of variety of display layout properties may be utilized with the present invention.

Please amend the paragraph beginning on page 10, line 30, as follows:

In an actual embodiment of the present invention, in the event display object [[106is]]106 is to be rendered as display object with a RTL language reading direction, the box renderer

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honors the directional property by adjusting the reference point of the display object corresponding to the specified language reading direction. FIGURE 2B is a block diagram 108 illustrative of the display screen [[104of]]104 of FIGURE 2A, in which the display objects, including display object 106, have a RTL language reading direction. In this illustrative embodiment, although the directional property of the display object 106 has changed, the display object 106 retains its other specified layout properties. [[for]] For example, the "content align" property is rendered such that the content is now aligned in the top right corner of the display object. Additionally, the "padding = 2, 5, 6, 10" property specifies padding dimensions from the left, top, right, and bottom of the display object respectively. As will be explained in greater detail below, however, note that some properties, such as the "text string = FRED" property, does not change because the parameter does not change with a change in the specified language reading direction.

Please amend the paragraph beginning on page 12, line 24, as follows:

In another illustrative embodiment of the present invention, the layout manager defines each child element by a bounding rectangle organized as a flow layout. FIGURE [[3B]]3C is a block diagram of a flow layout 122 of display objects implemented by a layout manager in accordance with the present invention. As illustrated in FIGURE [[3B]]3C, the layout manager establishes the flow layout 122 such that [[which]] each child element is defined by a bounding rectangle organized in a horizontal row. In this embodiment, each bounded rectangle is not equal in size, but are generated such that the space covers the horizontal space assigned to the display objects. For example, bounded rectangle 124 is defined by the coordinates "x=0" and "y=0" to signify that the bounded rectangle is the left most bounded rectangle. On the other hand, bounded rectangle 126 is defined by the coordinates "x=Cx6" and "y=0", where Cx6 is [[s]] defined as a point along the x-axis of the grid [[122that]]122 that is a function of the total

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length of the x-axis. Because the flow layout 122 [[fits]] is concerned with horizontal placement, the y-coordinate for the bounded rectangles does not change. One skilled in the art will appreciate that any one of a variety of layouts may be utilized by a layout manager, including, but not limited to the combination of both grid and flow layouts, border layouts, fill layouts, vertical flow layouts, ninegrid layouts, and any variety of extensible layout configuration.

Please amend the paragraph beginning on page 13, line 20, as follows:

FIGURE [[3C]]3B is a block diagram 128 illustrative of the grid layout [[110of]]110 of FIGURE 3A adjusted by a layout manager to reflect a RTL language reading direction in accordance with the present invention. As illustrated in FIGURE 3A, the layout manager maintains the relationship between the bounded rectangles irrespective of the directional property being implemented. For example, bounded rectangle 130, corresponding to bounded rectangle 114 (FIGURE 3A), is still defined by the coordinates "x=0" and "y=0" even the direction of the x-axis has reversed. Likewise, bounded rectangle 132 is still defined by the coordinates "x=Cx" and "y=0". However, one skilled in the relevant art will appreciate that the layout manager correlates these logical coordinates to different physical coordinates within the display screen. Thus, once an application author defines the display objects in terms of logical coordinates, the layout manager correlates physical coordinates depending on an indicated language reading direction.

Please amend the paragraph beginning on page 14, line 16, as follows:

To mitigate the rendering of non-mirrorable display object, the present invention provides each graphical resource with information indicating whether the resource can be mirrored and what direction the resource was authored in. Specifically, the present invention utilizes a truth table that establishes whether a display object can be rendered with a different directional

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property. FIGURE 4 is a block diagram [[134of]]134 of a truth table utilized in accordance with the present invention. As illustrated in FIGURE 4, the table 134 includes a column 136 for indicating whether the graphic resource is mirrorable, a column 138 whether the graphic resource was authored as an RTL object, a column 140 whether the display object has been defined as being RTL and a column 142 that determines whether the graphic resource has to be mirrored. One skilled in the relevant art will appreciate that any one of a variety of data structures can be utilized with the present invention to ~~tracking the~~ track whether a graphical resource, or other resource, can be mirrored. All are considered to be within the scope of the present invention.

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Please amend the paragraph beginning on page 14, line 30, as follows:

As illustrated in FIGURE 4, in an actual embodiment of the present invention, the information in the truth table 134 is represented as individual bits with a "0" defining a negative state and a "1" defining a positive state. With reference to FIGURE 4, at row 144, the graphical resource is defined as not mirrorable, as not RTL, and that the display object is not RTL. Accordingly, at block [[138]]146, the truth table [[126]]134 generates a result that the graphical resource should not be mirrored. However, at row [[140]]148, the graphical resource is mirrorable, not defined as RTL, but the display object is defined as RTL. Thus, the truth table [[126]]134 at block [[142]]150 defines that the graphical resource may be mirrored.

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A replacement abstract showing the changes made is appended hereto as a separate page.

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